

SE 6356 Software Maintenance, Evolution
and Re-Engineering - Fall 2016
Assignment #1 - Due date: 10/04/2015
-- part 1 --

Introduction

In this assignment you will be implementing three change requests for aTunes, a media and manager player. Instructions for opening the source code and installing aTunes are given in following sections. The instructions are for Eclipse but you could use any other IDE you are familiar with, such as, IntelliJ.

JDK and Eclipse

- Regardless of your operating system, you will need to install some Java Virtual Machine (JVM). Since you intend to use Eclipse for Java development, you should install a JDK (the JDK includes—among other useful things—the source code for the standard Java libraries). Visit the Oracle Java SE download website¹ to get the latest version of the JDK.
- To install Eclipse, all you do is unpack the zip file download in the desired directory. No further work is required (other than making sure you have a Java Runtime Engine installed). When you unzip the file, it creates a subdirectory called "eclipse", with multiple subdirectories under that. Visit the Eclipse download website² to get the latest version of Eclipse IDE for Java EE Developers.

Downloading and Deploying aTunes

Get the aTunes code³ and create a repository in your GitHub account. Clone your aTunes repo on your local machine. Follow the instructions below to load the aTunes project in Eclipse as a Java project:

1. Start Eclipse and open the Java Perspective (if not already open).
2. Select File New Java Project.
3. Give a name to the project.
4. Select the option Create project from existing source and then, using the browse button, navigate to the location where you cloned aTunes. Select the folder containing the source code.
5. Click OK.
6. Click Finish.

Now you can navigate the project and explore its classes or run the program by following the next steps:

1. Right-click on the project in the Package Explorer and selecting Run As Java Application.
2. Search for the string Main in the text box which appears in the Select Java Application window and select the Main class in the net.sourceforge.atunes package.
3. Click Ok.

¹ <http://www.oracle.com/technetwork/java/javase/downloads/index.html>

² <http://www.eclipse.org/downloads/>

³ <https://www.dropbox.com/s/2snx4548vexuf8f/aTunes.zip?dl=0>

Change Request #1

In a playlist in ATunes, it is possible to sort the entries (songs) based on the columns in the playlist table (i.e., Track, Title, Artist, Album, Genre), by clicking on the corresponding column header (see Figure 1). However, it is not possible to sort the entries based on their duration. You are requested to implement the changes so that when clicking on the Duration column header, the entries in the playlist are sorted in ascending order based on their duration.

column
↓

← headers

Tr...	Title	Artist	Album	Genre	Duration
	All I Want	Susie Suh	One Tree Hill II	Adult Alternative	4:19
	Copper Moon	Tom Freund	One Tree Hill II	Alternative Co...	6:05
1	Farewell Transmission	Songs Ohia	Unknown Album		7:22
	Flight Of The Hobo	Rocket From The Crypt	One Tree Hill III	Alternative-Rock	3:28
1	Glad To Be Alive	Low Flying Owls	Unknown Album		4:44
8	Good Girl,bad Boy	Junior Senior	Unknown Album		2:37
11	He Lays In The Reins	Iron And Wine & Caléxico	The Road Mix: Music Fro...	Indie	3:38
6	He'll Be Around	Boss Martians	Unknown Album		3:48
3	Home	Sheryl Crow	Unknown Album		4:50
5	Hope	The Submarines	Unknown Album		3:54
15	Hope Springs Eternal	John Gold	One Tree Hill II	Soundtrack	3:46
11	I've Got A Dark Alley And A Ba	Fall Out Boy	One Tree Hill Volume 2: ...	AlternRock	4:56
10	It's Only Love	Sheryl Crow	Unknown Album		5:05
1	Kung-fu Fighting	Bus Stop & Carl Douglas	One Tree Hill I	Disco	3:46
8	Lucky Kid	Sheryl Crow	Unknown Album		4:02
	Mid November	Jonathan Rice	One Tree Hill II	Rock/pop	4:03
4	No Tomorrow	The Blackouts	Unknown Album		4:23
10	Please Please Please	Shout Out Louds	One Tree Hill Volume 2: ...	Indie Pop	3:29
5	Rose	Stephen Fretwell	Unknown Album		4:12
12	Runaway	Trailer Park Pam	One Tree Hill II	Rock	8:19
	Sleeping Song	Sebastien Schuller	One Tree Hill III	Indie Rock	4:15
13	The First Cut Is The Deepest	Sheryl Crow	Music From The Televisio...	Blues Rock	3:51
2	The Good Kind	The Wreckers	Music From The Televisio...	Pop	3:47
3	Trondheim	Tom Freund	Unknown Album		4:57
5	You Dance	East Mountain South	Unknown Album		3:57

Figure 1: aTunes playlist

Change Request #2

The Options button in aTunes allows the user to manage the content of a panel (see Figure 2). You are requested to add the Show Duration option to the options menu of the Playlist panel.

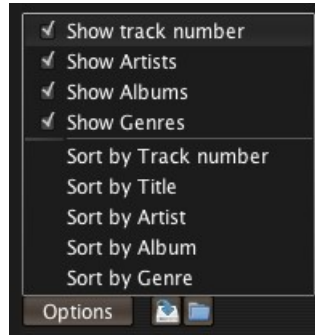


Figure 2: Options menu in the Playlist panel of aTunes

Change Request #3

You are requested to incorporate a new column in the Playlist panel (see Figure 1) that shows the location of the song. The column must be displayed in the Spanish version with the name “Directorio” and in the English version with the name “Path File”.

Deliverables

1. Modified source code of the systems. Consider the next instructions for this:
 - a. Create a repository for each system into your GitHub account.
 - b. Clone the forked repository in your local machine.
 - c. Modify the source code according to the chosen change request.
 - d. Push the changes into your GitHub repository.
 - e. Add the TA and instructor as collaborators of your repository (GitHub accounts: ojchar and amarcusgit)
2. Change log for each change request. Fill-in the attached change log for each implemented change request. Add it to your GitHub repository.
 - a. Submit the logs using eLearning.

Notes

- The logs should not contain gaps in the process you followed. Provide enough details about queries, tools used, classes visited, decisions, etc. Any person should be able to precisely understand the process you followed. It is very important to clearly describe the rationale of your tasks and decisions.
- Do not forget to evaluate the process you went through and provide enough details in the conclusions in the change request logs. Include details on why some steps were harder than others.
- Specify in the logs who of the team members did the coding and who did the documentation.
- Proofread carefully your logs.
- You will not receive credit for this assignment if:
 - o You do not fill the logs.
 - o Your code does not compile.
 - o You do not add the TA and instructor as collaborator in your repository.